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(FILE 'HOME' ENTERED AT 16:39:53 ON 20 SEP 2003)

FILE 'REGISTRY' ENTERED AT 16:40:04 ON 20 SEP 2003

L1 STRUCTURE UPLOADED
L2 1 S L1
L3 5 S L1 FULL

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L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L3 5 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 1938 ITERATIONS
SEARCH TIME: 00.00.01

5 ANSWERS

=> fil capl

FILE 'CAPLUS' ENTERED AT 16:41:12 ON 20 SEP 2003

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FILE COVERS 1907 - 20 Sep 2003 VOL 139 ISS 13

FILE LAST UPDATED: 19 Sep 2003 (20030919/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

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L4 1 L3

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

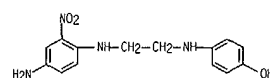
ACCESSION NUMBER: 2001:31580 CAPLUS
 DOCUMENT NUMBER: 134:102212
 TITLE: Novel dyes and colorants suitable for dyeing human hair
 INVENTOR(S): Hollenberg, Detlef; Hoffkes, Horst; Foitzik, Joachim-Kurt; Rose, David; Naumann, Frank; Wolfram, Leszek J.
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
 SOURCE: PCT Int. Appl., 64 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002492	A1	20010111	WO 2000-EP6159	20000701
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19930927	A1	20010111	DE 1999-19930927	19990706
EP 1189993	A1	20020327	EP 2000-949238	20000701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 200304447	T2	20030204	JP 2001-508272	20000701
PRIORITY APPLN. INFO.: DE 1999-19930927 A 19990706 WO 2000-EP6159 W 20000701				

ABSTRACT:
 The hybrid dyes have the structure XSY, where X represents a chromophoric group that is derived from a direct dye, Y represents a group that is derived from a coupler- or developer-type oxidn. dye precursor, an indole deriv. as a precursor of melanins, or a direct dye, and S represents a direct bond or a spacer group, provided that S does not represent an alkylene or mono- or polyhydroxyalkylene group if Y is derived from a direct dye. The use of colorants contg. these dyes avoids or significantly minimizes a no. of problems that occur with the use of complex dye mixts. Thus, 1-[[3-[(4-aminophenyl)amino]propyl]amino]anthraquinone-3HCl (I) was prepd. by alkylation of 3-(p-nitroanilino)propylamine with 1-chloroanthraquinone, followed by hydrogenation using 5% Pd on charcoal. A hair cream formulation contg. I and 2-(2,4-diaminophenoxy)ethanol was applied to hair and developed with H2O2 soln. to provide a bluish gray shade.

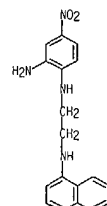
L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

IT 318969-25-4P 318969-26-5P 318974-94-6P.
 4-[[2-(2,4-dinitroanilino)ethyl]amino]phenol sulfate
 RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (hybrid dyes and colorants suitable for dyeing human hair)
 RN 318969-25-4 CAPLUS
 CN Phenol, 4-[[2-[(4-amino-2-nitrophenyl)amino]ethyl]amino]-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 318969-26-5 CAPLUS
 CN 1,2-Benzenediamine, N1-[2-(1-naphthalenylamino)ethyl]-4-nitro- (9CI) (CA INDEX NAME)

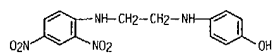


RN 318974-94-6 CAPLUS
 CN Phenol, 4-[[2-[(2,4-dinitrophenyl)amino]ethyl]amino]-, sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

CRN 318974-93-5
 CNF C14 H14 N4 O5

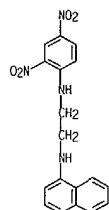


CM 2

CRN 7664-93-9
 CNF H2 O4 S



IT 318969-27-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (hybrid dyes and colorants suitable for dyeing human hair)
 RN 318969-27-6 CAPLUS
 CN 1,2-Ethanediamine, N-(2,4-dinitrophenyl)-N'-1-naphthalenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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FILE 'CAOLD' ENTERED AT 16:42:06 ON 20 SEP 2003

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

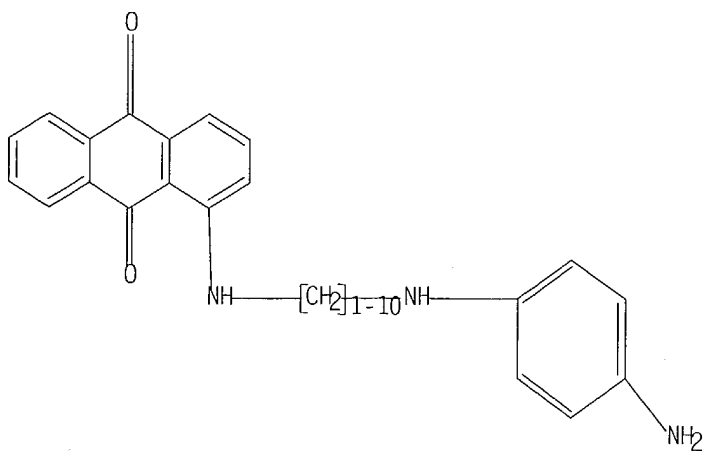
This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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Structure attributes must be viewed using STN Express query preparation.
L7 STR

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L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

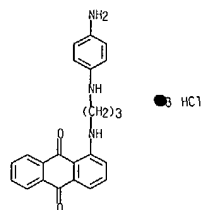
ACCESSION NUMBER: 2001:31580 CAPLUS
 DOCUMENT NUMBER: 134:102212
 TITLE: Novel dyes and colorants suitable for dyeing human hair
 INVENTOR(S): Hollenberg, Detlef; Hoffkes, Horst; Foitzik, Joachim-Kurt; Rose, David; Naumann, Frank; Wolfram, Leszek J.
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
 SOURCE: PCT int. Appl., 64 pp.
 CODEN: PIXY02
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002492	A1	20010111	WO 2000-EP6159	20000701
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, RW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19930927	A1	20010111	DE 1999-19930927	19990706
EP 1189993	A1	20020327	EP 2000-949238	20000701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 200304447	T2	20030204	JP 2001-508272	20000701
PRIORITY APPL. INFO.: DE 1999-19930927 A 19990706 WO 2000-EP6159 W 20000701				

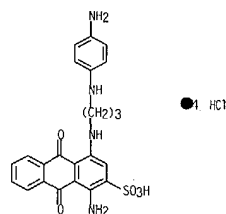
ABSTRACT:
 The hybrid dyes have the structure XSY, where X represents a chromophoric group that is derived from a direct dye. Y represents a group that is derived from a coupler- or developer-type oxidn. dye precursor, an indole deriv. as a precursor of melanins, or a direct dye, and S represents a direct bond or a spacer group, provided that S does not represent an alkylene or mono- or polyhydroxyalkylene group if Y is derived from a direct dye. The use of colorants contg. these dyes avoids or significantly minimizes a no. of problems that occur with the use of complex dye mixts. Thus, 1-[[3-[(4-aminophenyl)amino]propyl]amino]anthraquinone-3HC1 (I) was prepd. by alkylation of 3-(p-nitroanilino)propylamine with 1-chloroanthraquinone, followed by hydrogenation using 5% Pd on charcoal. A hair cream formulation contg. I and 2-(2,4-diaminophenoxy)ethanol was applied to hair and developed with H2O2 soln. to provide a bluish gray shade.

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

IT 318969-23-2P 318969-24-3P
 RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (hybrid dyes and colorants suitable for dyeing human hair)
 RN 318969-23-2 CAPLUS
 CN 9.10-Anthracenedione, 1-[[3-[(4-aminophenyl)amino]propyl]amino]-, trihydrochloride (9C1) (CA INDEX NAME)



RN 318969-24-3 CAPLUS
 CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[(4-aminophenyl)amino]propyl]amino]-9,10-dihydro-9,10-dioxo-, tetrahydrochloride (9C1) (CA INDEX NAME)



L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

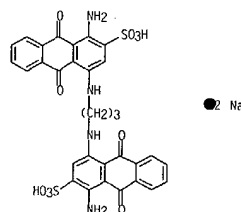
ACCESSION NUMBER: 1970:80348 CAPLUS
 DOCUMENT NUMBER: 72:80348
 TITLE: Anthraquinone dyes and their intermediates
 INVENTOR(S): Simonnet, Andre; Cabut, Louis
 PATENT ASSIGNEE(S): Ugine Kuhlmann
 SOURCE: Fr., 4 pp.
 CODEN: FRXXAK
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1529724		19680621	FR	19670421

GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

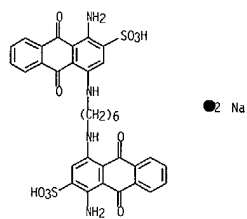
ABSTRACT:
 I, where R is alkylene or cycloalkylene give blue shades on nylon. Thus, Na 1-amino-4-(3-aminopropylamino)anthraquinone-2-sulfonate 6 was treated with Na 1-amino-4-bromoanthraquinone-2-sulfonate 8, 35 and water 42 in the presence of NaOH 2.1 and CuSO4 0.33 part at 80.degree. for 6 hr to give II[R = (CH2)3, X = H], a blue powder, reddish blue on nylon. Similarly prepd. were the following I (R, X, and shade on nylon given): (CH2)6, H, reddish blue; 1,4-cyclohexylene, H, blue; A, H, reddish blue; (CH2)6, SO3Na, blue.

IT 23386-34-7P 23409-75-8P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (prepn. of)
 RN 23386-34-7 CAPLUS
 CN 2-Anthracenesulfonic acid, 4,4'-(trimethylenedimino)bis[1-amino-9,10-dihydro-9,10-dioxo-, disodium salt (8C1) (CA INDEX NAME)



RN 23409-75-8 CAPLUS
 CN 2-Anthracenesulfonic acid, 4,4'-(hexamethylenedimino)bis[1-amino-9,10-

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
dihydro-9,10-dioxo-, disodium salt (BCI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 16:02:52 ON 20 SEP 2003)

FILE 'CAPLUS' ENTERED AT 16:03:09 ON 20 SEP 2003

L1 2 S (SUBSTANTIVE (W) (DYE OR DYESTUFF OR COLORANT)) (L) ((OXIDATI

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L1 2 SEA FILE=CAPLUS ABB=ON PLU=ON (SUBSTANTIVE (W) (DYE OR
DYESTUFF OR COLORANT)) (L) ((OXIDATION DYE PRECURSOR) OR
(INDOLE OR INDOLINE))

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L1 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1960:15493 CAPLUS
 DOCUMENT NUMBER: 54:15493
 ORIGINAL REFERENCE NO.: 54:3022d-g
 TITLE: Halation-prevention and filtering layers for photographic materials
 INVENTOR(S): Burgardt, Lothar; Wahl, Ottmar
 PATENT ASSIGNEE(S): Agfa Akt.-Ges.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1003573		19570228	DE	

ABSTRACT:

Diffusion-fast adducts of basic dyes and acidic substantive
 dyes formed by condensation of carbazolealdehydes the N of which has been substituted by org. residues or indolealdehyde derivs. on one side, and compds. with active methylene groups on the other side, are, together with gelatin suitable for the production of clearly colored layers, recommended as halation protection and filtering layers. The spectral absorption is, save an extension, not altered. Suitable basic dyes are: fuchsin, parafuchsin, neofuchsin, methyl violet, malachite green, Brilliant Green, and dyes of the type 2-[p-(diethylamino)styryl]-3,3-di-R-indolemethochloride, where R = H or Me. A suitable substantive dye, 3-(2-benzoyl-2-cyanovinyl)
 indole -2-carboxylic acid was prepd. by refluxing 19 g. 3-formylindole-2-carboxylic acid (Shabica, et al., C.A. 40, 57213) and 14.5 g. 2-cyanoacetophenone in 150 ml. MeOH for 30 min. The pptd. dye is applied in the form of its Na salt.

L1 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1960:9189 CAPLUS
 DOCUMENT NUMBER: 54:9189
 ORIGINAL REFERENCE NO.: 54:1877c-1,1878a-e
 TITLE: Aromatic tricyanovinyl derivatives
 INVENTOR(S): Heckert, Richard E.
 PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2889335		19590602	US	
DE 1099671			DE	

ABSTRACT:

A series of new, cryst., substantive dyes for natural and synthetic fibers of the general formula p-RR'-NC6H4C(CN)2 (I), where R is H, hydrocarbon, or substituted hydrocarbon, and R' is hydrocarbon or substituted hydrocarbon, was prepd. Thus, p-Me2NC6H4CH:C(CN)2 (II) 20 and KCN 13 in 50% aq. EtOH 180 heated 3-4 min. on the steam bath with stirring, filtered, dild. with H2O 200 contg. AcOH 21 parts, and filtered yielded p-Me2NC6H4CH(CN)CH(CN)2 (III), m. 138-9.degree. (60% aq. EtOH). III 20 in AcOH 210 heated 2 hrs. with stirring at 100.degree. gave p-Me2NC6H4C(CN):C(CN)2 (IV) 7.8 parts, dark blue needles, .lambda.max. 515 m.mu. (epsilon. 36,200). Bz2O2 will also oxidize III to IV. [C:C(CN):2]2 (V) 10 in tetrahydrofuran 266 treated dropwise with PhNHMe 12.8, the solvent boiled off on the steam bath, and the residue recrystd. from MeOH gave p-Me2NC6H4C(CN):C(CN)2 20 parts, bright blue solid, epsilon. 500 33,250. V 10 in dry tetrahydrofuran 178 treated with PhNHMe2 19.3, refluxed on the steam bath, and evapd. gave IV 16 parts, epsilon. 515 33,750. V 50 and 2,6-Me2C6H3NH2 50, gave 3,5,4-Me2(H2N)C3H3C(CN):C(CN)2 45 parts, brilliant dark blue, m. 288-9.degree. (MeNO2), epsilon. 500 35,500. V 128 and 1-methylpyrrole 89 gave 1-methyl-2-(tricyanovinyl)pyrrole 130 parts, bright yellow, m. 182-3.degree. (EtOH), epsilon. 388 18,200. V 128 and pyrrole 67 gave 2-(tricyanovinyl)pyrrole 75 parts, yellow-orange, m. 211-13.degree. with some decompn. starting at 205.degree., epsilon. 428 25,700. MePhN(CH2)2CN 56 and V 50 gave p-Me(NCCH2CH2)NC6H4C(CN):C(CN)2 18 parts, m. 159-60.degree., epsilon. 498 30,500. V 50 and BuPhN(CH2)2CN 71 gave about 66% pure p-Bu(NCCH2CH2)NC6H4C(CN):C(CN)2 52 parts, m. 128-9.degree., epsilon. 505 35,000 (approx.). V 50 and tetrahydroquinoline 50 gave 6-tricyanovinyl-1,2,3,4-tetrahydroquinoline 65 parts, m. 187.degree., epsilon. 525 24,300 (70% pure). PhNH 70 and V 50, yielded p-PhNH6H4C(CN):C(CN)2 63 parts, m. 157-8.degree., epsilon. 512 37,000. V 50 and PhNHCH2CH2OH 55, gave p-HOCH2CH2NH6H4C(CN):C(CN)2, red-brown, m. 162-3.degree., epsilon. 502 32,600. V 50 and PhNHCH2CH2CN 58, gave p-NCCH2CH2NH6H4C(CN):C(CN)2 (VI), 33.5 parts.

L1 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
 m. 131-2.degree., epsilon. 437 32,900. V 42 and o-MeC6H4NHCH2CH2CN 53, gave 3,4-Me(NCCH2CH2NH)C6H3C(CN):C(CN)2 37.8 parts, m. 161-2.degree., epsilon. 485, 30,300. V 50 and 2,6-Me2C6H3OH 48, gave 3,5,4-Me2(HO)C6H2C(CN):C(CN)2 (VII) 27 parts, black crystals, m. 184-5.degree., which on heating or exposure to air become red and finally orange; the mother liquor gave 2nd crop 47 parts; the combined black VII recrystd. twice from AcOH gave VII 25 parts, orange needles, m. 182-3.degree. (decompn.); bright yellow in dill. acid and deep burgundy in alkali, epsilon. 538 48,000 (EtOH contg. 5% Et3N), epsilon. 426 21,200 (EtOH contg. 1% AcOH). V 9.5 and PhNEt2 10 gave p-Et2NC6H4C(CN):C(CN)2, dark blue, m. 164.degree. (AcOH), epsilon. 521 46,500; it gives red dyeings on Dacron fibers and blue-red dyeings on Orion; when boiled in an aq. dye bath of pH 4, it is 50% destroyed in 5.5 hrs. Similarly were prepd. the following I (R, R', m.p., absorption max. in Me2CO in m.mu., and mol. extinction coeff. given): HO2CCH2, H, 235-7.degree., 488, 37,100; iso-Am. H, 120-1.degree., 503, 44,400; PhCH2, H, 150-1.degree., 498, 417,500; o-HO2CC6H4, H, 215-16.degree., 483, 27,400; 1-ClOH7, H, 210-12.degree., 498, 36,800; ClCH2CH2, Et, 152-3.degree., 507, 43,300; NCCH2CH2, Me, 174-5.degree., 502, 40,000; NCCH2CH2, Et, 159-60.degree., 507, 42,300; NCCH2CH2, NCCH2CH2, 156.degree., 488, 37,200; NCCH2CH2, BzOCH2OCH2CH2, NCCH2CH2, 157-8.degree., 495, 40,300; Pr, Pr, 138-9.degree., 524, 47,300; Bu, Bu, 126-7.degree., 525, 47,100; PhCH2, PhCH2, 167-8.degree., 507, 44,500; BzOCH2CH2, BzOCH2CH2, 185.degree., 505, 41,700; Me, Ph, 108-9.degree., 509, 40,900; Et, Ph, 147-8.degree., 511, 43,500; C6H13, Ph, 88-9.degree., 513, 43,900; Cl2H25, Ph, 77-8.degree., 513, 43,400; Ph, Ph, 174-5.degree., 513, 34,600; and N-(p-tricyanovinylphenyl)morpholine, 188-9.degree., 507, 35,900; p-tricyanovinyljulolidine, 265-6.degree., 555, 47,200; bis[2-(N-methyl-4-(tricyanovinyl)anilino)ethyl] terephthalate, 284-5.degree., 519, 69,100; 3-(tricyanovinyl)indole, 275-6.degree., 453, 20,700. m-ClC6H4COCl 61 added gradually with stirring to MePhNCH2CH2OH 50 in C6H5N 150 at 50-60.degree., stirred 5 min. at 80.degree., cooled to 25.degree., treated gradually with V 44 at 25-35.degree., stirred 5 min. at 55.degree., cooled to 5.degree., treated with AcOH 250, poured with stirring into ice and H2O 2500, and filtered gave 4-Me(m-ClC6H4CO2CH2CH2)NC6H4C(CN):C(CN)2 64 parts, m. 131-6.degree.; it gave red dyeings with Orion and Dacron fibers; epsilon. 510 40,200; only 17% dye is destroyed when refluxed 22 hrs. in a bath at pH 4. Similarly were prepd. the following compds. p-(RCO2CH2CH2N(Me)C6H4C(CN):C(CN)2 (R, m.p., .lambda.max. in m.mu., and mol. extinction coeff. given): EtO2C(CH2)4, 80-2.degree., 510, 41,600; Et2CH, 94-101.degree., 510, 42,600; iso-Bu, 122-5.degree., 510, 43,400; Ph, 141-2.degree., 510, 40,600; p-MeC6H4, 144-5.degree., 511, 41,600; 4,3-Me(O2N)C6H3, 153-4.degree., 510, 40,600; 1-ClOH7, 179-85.degree., 512, 38,200. IV 3 in HCONMe2 50 added to Na dodecyl sulfate 10 in boiling H2O 1000 parts, heated with stirring at 90-5.degree., until a uniform dispersion is obtained, and skeins of cellulose acetate fibers soaked and stirred 15 min. in this mixt., washed, and dried gave a bright red, light-fast dyeing.

10/031,740

Page 3

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L2 16 SEA FILE=CAPLUS ABB=ON PLU=ON (SUBSTANTIVE DYE) (L) (KERATIN
 OR HAIR OR SKIN)

=> d 1-16 ibib iabs

L2 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1970:404955 CAPLUS
 DOCUMENT NUMBER: 73:4955
 TITLE: N-(.beta.-Ureidoethyl)-p-phenylenediamine dyes for keratin fibers
 INVENTOR(S): Kalopissis, Gregoire; Gascon, Jean; Gaston-Breton, Hubert; Bugaut, Andree; Gallien, Jaqueline
 PATENT ASSIGNEE(S): Oreal S. A.
 SOURCE: Ger. Offen., 32 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1945451	A	19700423	DE 1969-1945451	19690908
DE 1945451	B2	19770804		
US 3697215	A	19721010	US 1969-854784	19690902
GB 1272329	A	19720426	GB 1969-1272329	19690908
US 4008272	A	19770215	US 1975-578318	19750516

PRIORITY APPLN. INFO.: LU 1968-56846 19680909
 LU 1969-57792 19690116
 US 1969-854784 19690902
 US 1972-247892 19720426

GRAPHIC IMAGE: For diagram(s), see printed CA issue.

ABSTRACT:
 The title compds. (I) were prepd. as dyes for keratin fibers, esp. human hair, with good fastness to light, weathering, and washing. I (R = H), m. 126.degree. (Me2CHOH), was prepd. by reaction of 4-OZNC6HANHCH2CH2NHRL (II, R1 = H) with KNCO to give II (R1 = CONH2), m. 187.degree., and redn. with NaHSO3. I (R = Me, MeO, and Cl) were prepd. by reaction of 2,4-R(OZNC6H3Cl) with H2NCH2CH2NH2.HCl, reaction with KNCO, and redn. with H2NNH2 in the presence of Raney Ni or with NaHSO3. Formulations for ***hair*** dyes contg. 1. couplers, surface active agents, and ***substantive*** dyes in aq. soln. or as creams are reported.

L2 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1960:52976 CAPLUS
 DOCUMENT NUMBER: 54:52976
 ORIGINAL REFERENCE NO.: 54:10359f-1,10360a-b
 TITLE: Action of pyrocatechol and formaldehyde on animal skin. Contribution to the nature of condensation tannage
 AUTHOR(S): Stather, F.; Reich, G.; Steinhardt, R.
 CORPORATE SOURCE: German Leather Inst., Freiberg, Germany
 SOURCE: Revue Technique des Industries du Cuir (1960), 52, 1-10
 CODEN: RTICAS; ISSN: 0035-4236
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 ABSTRACT:

In a statistically designed expt., pieces of unhaird and delimed calf-***skin*** were tanned with pyrocatechol (I)-HCHO-Al2(SO4)3 solns. at 40.degree., and were subsequently washed with H2O and with (NH4)2SO4 soln. to remove excess HCHO. Increasing the duration of the condensation from 8 to 24 hrs. gave a greater vol. yield and better product. Increasing the amt. of HCHO from 2 to 4 moles/mole of I and the Al2(SO4)3.18H2O from 3 to 13%, based on the wt. of the stock, gave similar, but less pos. results. Increasing I from 10 to 15%, based on the wt. of the stock, increased the wt. of the leather but decreased leather vol. and quality. The influence on the shrinkage temp. of increasing the following factors from the previously designated lower to higher levels was: condensation time, large increase; HCHO, large increase; 1. moderate increase; Al2(SO4)3, no change. A mellower leather was obtained if I was added 1st and the other 2 reagents were subsequently added simultaneously, than if either HCHO or Al2(SO4)3 (with addn. of NaCl to inhibit swelling) was added 1st. Results obtained with a com. I prepn. contg. a methyl homolog are discussed. It is postulated that an Al-pyrocatechol complex is formed 1st, by which the reaction of I with HCHO is accelerated; it is not regarded as proved that the condensed I and collagen react according to a Mannich reaction. The process was carried out on a pilot scale in the prepn. of various leathers. Infrared light was used for heating. Best results were obtained by fat-liquoring with anionic sulfonated oils and by dyeing with anionic or ***substantive*** dyes. Satisfactory leathers were, in general, obtained by the usual processes. Pretannage by this process accelerates the diffusion of tannin into hides to a greater extent than pretannage with either Cr or HCHO, and it also increases the resistance to shrinkage by sweat. It is suggested that pretannage with I-HCHO-Al2(SO4)3 be used in leathers where it is desired to accelerate vegetable tannage or to prep. in sole leather that is very sweat resistant.

L2 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1959:91828 CAPLUS
 DOCUMENT NUMBER: 53:91828
 ORIGINAL REFERENCE NO.: 53:16548g-h
 TITLE: Dyeing of keratinaceous fibers
 INVENTOR(S): Tucker, Harold H.
 PATENT ASSIGNEE(S): Jos. H. Lowenstein & Sons, Inc.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2890094		19590609	US	

ABSTRACT:
 The use of unsatd. monomers in conjunction with substantive ***dyes*** gives excellent dyeing of keratin fibers. The addnl. use of a S-contg. reducing agent in the dye bath with the monomer is also helpful. Thus, a natural undyed beaver skin was dyed black by immersion for 90 min. at 49.degree. in a soln. contg. Na2SO4 5, "Ethofat C-15" 1, itaconic acid 50, thiourea 50, Anthraquinone Blue SWF 5, and Calocid Orange Y Extra concentrate 1.50 g. dissolved in 1000 cc. H2O. The initial pH of the soln. was 1.9. The skin was a deeper, more lustrous black than another dyed at 57.degree. without itaconic acid and thiourea.

L2 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1954:5447 CAPLUS
 DOCUMENT NUMBER: 48:5447
 ORIGINAL REFERENCE NO.: 48:1006g-i
 TITLE: Fundamentals of the dyeing of cellulosic fibers
 AUTHOR(S): McCleary, H. R.
 CORPORATE SOURCE: Am. Cyanamid Co., Bound Brook, NJ
 SOURCE: Textile Research J. (1953), 23, 673-82
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 ABSTRACT:
 A review of the theoretical aspects of the dyeing of cellulose with ***substantive*** dyes. The oriented chainlike structure of cellulose contg. amorphous and cryst. regions influences its dyeing properties and the optical appearance of dyed fibers. Dye sorption seems to occur only in the amorphous regions, where single moles of dye are coordinatively bound to cellulose chains. The affinities of dyes for cellulose are obtainable from equil. dye-absorption data. Affinities decrease with increase in temp. Filament size has an effect on the appearance of dyed fibers because of differences in the light which is scattered. The skin structure of rayons slows down the penetration of dye to the interior of the fibers.

L2 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1952:37611 CAPLUS
DOCUMENT NUMBER: 46:37611
ORIGINAL REFERENCE NO.: 46:6378a-c
TITLE: The swelling and solution mechanism of soda-pulp fibers. VII
AUTHOR(S): Schramek, M.; Ahrberg, Lisa
CORPORATE SOURCE: Inst. Faserstoff-Forschung, Teltow-Seehof, Germany
SOURCE: Holzforschung (1951), 5, 97-106
CODEN: HOLZAZ; ISSN: 0018-3830
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

ABSTRACT:

cf. C.A. 38, 863.3; 42, 2100d; and Ludtke, C.A. 44, 90121. S. and A. give another series of photomicrographs that appear to throw further light on the nature of L.'s "skin substance" which is now looked upon as the primary wall and the extreme outer layer of the secondary wall of the pulp fiber. Three dissolving pulps were studied: a Borregard spruce sulfite (I), a Walldhoff sulfite (II), and a Norwegian pulp (III). The .alpha.-, .beta.-, and .gamma.-celluloses, lignin no., ash, resin, and degree of polymerization were, for I, II, and III, resp.: 87.1, 85.7, 86.1%; 5.8, 4.2, 5.96%; 5.4, 8.5, 6.88%; 0.13, 0.047, 0.12; 0.15, 0.045, 0.19%; 0.39, -, 0.56%; 760, 490, and 610. The swelling techniques (made in stages, with appropriate staining reactions with ***substantive*** dyes) are fully discussed, and photomicrographs indicate the course of the swelling in aq. NaOH, followed by ballooning and soln. during xanthation, carefully controlled by addn. of low concns. of aq. Na2SO4. S. and A. are in agreement with Dolmetch, Franz, and Correns (C.A. 38, 6091.2) in believing that the interpretation of Ludtke requires modification. Conflicting data in the literature are discussed briefly.

L2 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1952:25102 CAPLUS
DOCUMENT NUMBER: 46:25102
ORIGINAL REFERENCE NO.: 46:4244g-i
TITLE: Dyeing only the flesh side of chrome-tanned fur skins
INVENTOR(S): Luscher, Ernst; Engeloch, Albert
PATENT ASSIGNEE(S): Sandoz Ltd.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2583269		19520122	US	

ABSTRACT:

The flesh side of hair skins, previously chrome-tanned and buffed, are dyed exclusive of the wool or fur hair with ***substantive*** dyes in the presence of soaps or surfactants, such as alkaryl and fatty alc. sulfonates, oleic methylauride, oleic esters of hydroxy-ethanesulfonic acid, and the sulfonates of glycerol monooleate esters. These products are added to the dye bath at 0.25-3 g./l. of dye bath at 40-50.degree.. A more penetrating dyeing is obtained by adjustment of the dye bath to a max. pH of 9.2 with NH3 and acidifying to a min. pH of 3.3 shortly before dyeing is completed.

L2 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1952:16263 CAPLUS
DOCUMENT NUMBER: 46:16263
ORIGINAL REFERENCE NO.: 46:2806g-h
TITLE: Theory of dyeing. XIII. Effect of pH of the dye-bath on binding of acid and substantive dyes by wool keratin
AUTHOR(S): Sokolova, N. V.
SOURCE: Zhurnal Prikladnoi Khimii (Sankt-Peterburg, Russian Federation) (1948), 21, 966-75
CODEN: ZPKHAB; ISSN: 0044-4618
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

ABSTRACT:

cf. C.A. 45, 5931b. Acid and substantive dyes are bound by wool at all pH values from 1 to 8, the amt. of dye fixed (A mg.-equivs. per 100 g. of wool) increasing with diminishing pH; a satn. value of 80 is reached in 2-3 hrs. at pH 3-4 in the case of molecularly dispersed dyes, but not for colloidal dyes, which cannot penetrate into the interior of the fibers. At pH < 2, values of A > 80 are obtained, owing to hydrolysis of keratin. Introduction of wool into buffer solns. at pH < 4.5 raises the pH by about 1.

L2 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1946:7514 CAPLUS
DOCUMENT NUMBER: 40:7514
ORIGINAL REFERENCE NO.: 40:1313h-i,1314a-b
TITLE: Structure of viscose fibers with skin effect
AUTHOR(S): Wuhmann, K.
CORPORATE SOURCE: Eidg. Materialprufungs- Versuchsanstalt, St. Gallen
SOURCE: Helvetica Chimica Acta (1945), 28, 666-74
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: German

ABSTRACT:

When, on extrusion of the xanthate soln. from the spinneret into the coagulating bath, coagulation takes place at such a high rate that a surface ***skin*** of cellulose is formed, the latter retards access of the coagulating liquid to the central portion of the fiber which, consequently, coagulates much later. This results in an oriented membrane on the fiber surface and an unoriented central portion. The quant. optical investigation of such fibers confirmed the fact that the surface skins give much higher double refractive indexes than the central portion. Hence, the degree of orientation and the d. of packing of the 2 phases vary considerably. The differences in texture are apparent in one and the same fiber spun under various degrees of stretch. It is concluded that the skin formation depends primarily upon the compn. of the coagulating bath, whereas the draft to which the filament is subjected influences only the magnitude of orientation in the 2 phases but not the ratio to each other. The affinity for dyes of the 2 portions varies a great deal, the central portion always having a greater affinity than the skin, which exhibits only very slight or no dyestuff adsorption. This difference in dyeing behavior was observed whether ***substantive*** dyes or gold solns. in H2O and MeOH were used and cannot be explained solely by the difference in structure.

L2 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1940:27932 CAPLUS
 DOCUMENT NUMBER: 34:27932
 ORIGINAL REFERENCE NO.: 34:4271g-1,4272d-1,4273a-b
 TITLE: Increasing the fastness of dyeing with sulfur dyes
 AUTHOR(S): Khailov, I. M.; Ivanova, O. V.
 SOURCE: Khlopatobumazhnaya Prom. (1937), 7(No. 11), 46-52
 From: Chem. Zentr. 1938. II, 954-5
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 ABSTRACT:

Difficulties are encountered in the purification of S dyes. The purified dyes go into the vat less easily than the tech. product; the latter have a colloidal structure, which is altered by purification. The impossibility of obtaining the S dyes in the cryst. condition explains to a certain degree their lack of fastness to rubbing when wet. Certain S dyes are not homogeneous; they contain considerable amts. of dyestuffs sol. in water and weak soda solns. These are compds. of the type of primuline or products of oxidation in the air of the type of Nigrosulfine. This condition is especially pronounced with Thiogene Heliotrope O (I), Katigene Yellow GGD (II), Sulfur Pure Blue A T (III), and Pyrogene Brown 4 R and these dyes show the least fastness to washing and rubbing. These are, rather, substantive dyes since some of them in large part go into soln. in 3% soda. The washed ppts. and filtrates from I and III were investigated. Upon heating the filtrate with HCl the color did not change; this suggests the absence of indophenol. The filtrate possessed slight substantivity; the coloration was intensified by the addn. of Na₂S. III contained products of the oxidation and incomplete sulfuration of the S dye. Katigene Yellow GGD and other S dyes contain impurities of the primuline type which are responsible for the lack of fastness. The same is true for Sulfur Blue "RL." The color and fastness, especially the fastness to rubbing, are influenced by insol. substances adsorbed during dyeing. Solns. of S dyes which have been allowed to settle give fast colors. The influence of reducing agents and protective colloids was studied. The use of 1 part dye, 4 parts NaOH of 40 degree, 8 acte.e. and 1.8 parts concd. hyposulfite with a bath temp. of 55 degree, gave brighter and faster colors than the use of 2 parts Na₂S and 30 parts NaCl (85-90 degree.) or 2 parts glucose, 4 parts NaOH (40 degree, 8 acte.e.) and 30 parts NaCl to 1 part of dye. This was particularly true for Sulfur Blue K, Sulfur Yellow and Sulfur Black. Casein and glue in concns. of 5-100% of the dye were used to study the effect of protective colloids. An inverse ratio existed between the thoroughness of the dyeing and the amt. of protective colloid. Casein does not increase the fastness of the dye although glue does, the optimum amt. of the latter being 25% by wt. of the dye. Artificial resins have an effect similar to that of glue (in the presence of Na₂S) (10 g. phenol, 20 cc. 40% HCHO and 7.5 cc. 40 degree, 8 acte.e NaOH were used per l. of dye bath). Finishing with 5-10 g. glue per l. reduces the color in every respect. Treatment of the dye with "Fixateur T," tannin, CH₂ClCO₂Na, increases the fastness to light and to washing. When S dyes are treated with Cu salts, adsorption occurs or extremely

L2 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

unstable compds. of Cu with the S dye are formed. The amts. of CuSO₄ adsorbed by the following dyes were: by Sulfur Yellow-Brown B (with 13% free S) 25% (without free S) 18%; by Sulfur Blue P 20%; and by Sulfur Brilliant Green 25%. Treatment of the dyed fabric with CuSO₄ increases the fastness to light, especially in dyes with a thiazole structure and yellow-orange shades. In the presence of disulfite the shade is little changed by the Cu salt; the fastness to light, however, is less. For this treatment 3% CuSO₄·5H₂O (calcd. on wt. of fabric) and 2-3% of 30% H₂OAc are used with a bath temp. of 60 degree, and a bath concn. of 1:30. Even the fastness to washing is somewhat increased by the Cu salt. If, instead of treating the dyed fabric, the dye is treated before dyeing by heating for 3 hrs. at 90 degree, with 35% CuSO₄, similar results are obtained and the shade of color is even less changed. The Cu treatment appears to be suitable for S dyes which change color tone sharply after treatment and which do not come into contact with the human skin. Treatment of dyes with salts of Cr, Zn, Mo, W and Al changes the color only slightly; with the exception of Sulfur Black and Sulfur Brown, the fastness to light is increased by these salts; the fastness to washing is somewhat increased by Zn(OAc)₂. On the basis of the exptl. results the following recommendations are made for the use of S dyes: In order to increase the fastness to light: treatment with Cu salts, with "Fixateur T," with anhydroform-o-toluidine, or with CH₂ClCO₂Na. Fastness to light is improved to a less degree by chrome alum, Cr(OAc)₃, and Mo-W salts. Fastness to washing and rubbing is improved by purifying the dye from free, insol. S, allowing the soln. to settle and filtering, the addn. of protective colloids, soaping after dyeing, dressing with glue, etc., and combined dyeing, as, e. g., for bright green: 4% Sulfur Pure Blue + 4% Sulfur Yellow + 15% Na₂S + 30% NaCl + 3% Na₂CO₃.

L2 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1935:15694 CAPLUS
 DOCUMENT NUMBER: 29:15694
 ORIGINAL REFERENCE NO.: 29:2018b-d
 TITLE: The preparation of a chrome-tanned black calf-leather
 AUTHOR(S): Barsuk, A.
 SOURCE: Kozhevenno-Obuvnaya Promyshlennost SSSR (1933), 12, 31
 CODEN: KOPSAX; ISSN: 0375-9288
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 ABSTRACT:

A calf leather which was previously tanned was planed on the grain side, neutralized, treated with 2% of pure fats, dried, unhardened and nailed on frames. The skin was then worked over with grinding stones and the final treatment was given with pumice stone. Skins with a light nap were worked over with a wire brush (by hand). The skins were finally dyed with 15% (of their dry wt.) of substantive dyes and 4.5% NH₄OH, the mixt. being dild. with 50% water. The skins were moistened before dyeing. A number of other formulas for dyeing are given and the operations are described.

L2 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1924:12998 CAPLUS
 DOCUMENT NUMBER: 18:12998
 ORIGINAL REFERENCE NO.: 18:1756g-1
 TITLE: Dyes; dyeing; intermediate products
 PATENT ASSIGNEE(S): Soc. anon. pour l'Ind. chim. a Bale
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 209723		19231222	GB	

ABSTRACT:

Azo dyes contg. one or more cyanuric nuclei are prepd. either by coupling suitable components one or both of which contain cyanuric nuclei, or by uniting azo dyes together or with other compds. by means of cyanuric halides. The products include acid, mordant, and substantive dyes; the latter may be diazotizable on the fiber or may be developed on the fiber with diazo compds., or may be suitable for after-treatment with metal salts or with HCHO. Sol. metal compds. of the dyes, and products solubilized by the introduction of methyl-w-sulfonic groups into the amino groups, are also included. The dyes may also be prepd. on the fiber by impregnation with the intermediate cyanuric compds. and developing either by diazotizing and coupling or by a diazo compd. The dyes may also be used in the prepn. of lakes, or for dyeing skins, leather, etc. The intermediate compds. are prepd. by replacing one or more of the halogen atoms of cyanuric halides by appropriate radicals; these may be the residue of an aminonaphthol or deriv. thereof, or another residue which contains groups which render the product suitable as a diazo or coupling component; or a residue which, though not of the above type, contains atoms or groups which affect the tinctorial properties of the dye, for instance acylamino, alkoxy, aryloxy, acyloxy, nitro, carboxy, methyl, sulfonic, etc. Examples are given.

L2 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1921:20869 CAPLUS
 DOCUMENT NUMBER: 15:20869
 ORIGINAL REFERENCE NO.: 15:3914d-f
 TITLE: Chamois leather
 AUTHOR(S): Kohnstein, B.
 SOURCE: Collegium (Darmstadt) (1921) 338-9
 CODE: COLLA6
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

ABSTRACT:
 The usual methods of producing chamois leather are described. Most of this leather is made from deer or chamois skins, but sheepskins and, for piano key or buffing leather, steer hides are used. Recent methods of unhairing sheepskins are by sweating, to save lime, or by a lukewarm soln. of (NH₄)₂CO₃ (5 g. per l.). For tanning, a strongly oxidizable fish oil is used with CuSO₄ as a catalyst. Some skins have lately been dyed with acid or substantive dyes after retanning with Cr. Bleaching may be by sunlight or by a 0.5% soln. of KMnO₄ followed by a dil. H₂O₂ soln. (100 cc. H₂O₂ and 100 cc. H₂SO₄ in 2 l. water).

L2 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1921:20868 CAPLUS
 DOCUMENT NUMBER: 15:20868
 ORIGINAL REFERENCE NO.: 15:3914d-f
 TITLE: Chamois leather
 AUTHOR(S): Kohnstein, B.
 SOURCE: Haute und Lederberichte (1920), (No. 23)
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

ABSTRACT:
 The usual methods of producing chamois leather are described. Most of this leather is made from deer or chamois skins, but sheepskins and, for piano key or buffing leather, steer hides are used. Recent methods of unhairing sheepskins are by sweating, to save lime, or by a lukewarm soln. of (NH₄)₂CO₃ (5 g. per l.). For tanning, a strongly oxidizable fish oil is used with CuSO₄ as a catalyst. Some skins have lately been dyed with acid or substantive dyes after retanning with Cr. Bleaching may be by sunlight or by a 0.5% soln. of KMnO₄ followed by a dil. H₂O₂ soln. (100 cc. H₂O₂ and 100 cc. H₂SO₄ in 2 l. water).

L2 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1916:971 CAPLUS
 DOCUMENT NUMBER: 10:971
 ORIGINAL REFERENCE NO.: 10:197f-1,198a-1
 TITLE: Some Aminoazimido bases and their azo dye derivatives
 AUTHOR(S): Kym, O.; Ringer, M.
 CORPORATE SOURCE: Univ. Zurich
 SOURCE: Ber. (1915). 48, 1671-85
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

ABSTRACT:
 cf. C. A. 6, 356. As was expected, the azo dye derivs. of azimidobenzene compds., C₆H₄NH.N, having a 5-membered ring similar to that of benzimidazole, benzothiazole or benzoxazole compds., C₆H₄R.CH:N (R=NH, S or O), are substantive dyes capable of dyeing cotton directly without mordants, although they stand behind the imidazole compds. in this respect. 5-Nitro-2,3-toluylenediamine (a), in 50% yield from 10 g. 2,3,5-H₂N(O₂N)C₆H₂Me in 33 cc. boiling alc. treated with 18 g. crystd. Na₂S in 30 cc. H₂O, then dild. with 4 vols. cold H₂O, the red cryst. ppt. dissolved in cold dil. HCl, filtered, pptd. with NH₃ and crystd. from dil. alc., felted orange-red needles, m. 185.degree., easily sol. in dil. HCl; diacetyl derivative, obtained with Ac₂O on the H₂O bath, pale yellow needles from dil. alc., m. 234.degree., insol. in cold dil. HCl, but dissolves on warming; NH₃ now, however, ppts. the anhydro compd., 5-nitro-1,4-dimethylbenzimidazole, Me(O₂N)C₆H₂NH.CMe₂N, obtained directly by boiling (a) 4 hrs. with AcOH, dild. with much cold H₂O, filtering, making just alk. with NH₃ and crystg. from H₂O; it m. 186.degree., and dissolves easily in dil. HCl and also, with pure yellow color, in cold dil. NaOH. 5-Nitro-1-methylbenzimidazole, from (a) boiled a long time with HCO₂H, needles from H₂O, m. 199-200.degree., sol. in dil. HCl and, with yellow color, in dil. NaOH. 5-Nitro-1-methyl-4-hydroxybenzimidazole, from 1 g. (a) and 2.5 g. urea heated 1 hr. at 160-70.degree., until a solid cryst. mass is formed (evolution of NH₃), dissolved in warm dil. NaOH, filtered, pptd. with dil. HCl and crystd. from much hot H₂O, hair-like needles, m. 329-30.degree., sol. in cold dil. NaOH with intense yellow color, excess of concd. NaOH pptg. a cryst. brick-red Na salt. 5-Nitro-1-methyl-2,3-azimidobenzene, quant. obtained from (a) in cold dil. HCl and the calcd. amt. of NaNO₂, yellow needles from dil. alc., m. 252-3.degree., sol. in hot alc., Me₂CO or AcOH with yellowish color, in concd. HCl and, with intense yellow color, in dil. NaOH, reduced by SnCl₂, Sn and concd. HCl to the amino compound, brownish needles losing H₂O of crystn. at 80-5.degree. and m. 161-2.degree., easily sol. in cold dil. alkalis; acetyl derivative, obtained with NaOAc and boiling Ac₂O, needles from dil. alc., m. 283.degree., insol. in dil. HCl but easily sol. in dil. NaOH, gives with ice-cold NaOH and Ac₂O the diacetyl derivative, Ag-white needles from Me₂CO, m. 239-40.degree., which, boiled 1 hr. with H₂O, loses AcOH and regenerates the mono-Ac compd. 2,4,5-H₂N(AcNH)C₆H₂Me, from 2 g. of the NO₂ compd. added in small portions to 4 g. Fe filings in 100 cc. of warm 5% AcOH, warmed not more than 0.5 hr. (otherwise the imidazole is formed in considerable amt.), dild. with 60 cc. hot H₂O, filtered hot, freed from Fe with solid soda, filtered hot, concd. and crystd. from H₂O, m. 252-3.degree. (cf. Maron, C. A. 6, 362); with somewhat more than the calcd. amt. of NaNO₂ in cold dil. HCl, it at once gives

L2 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
 1-methyl-2-acetamino-4,5-acetylazimidobenzene, Me(AcNH)C₆H₂NAc.N, needles from Me₂CO, m. 220.degree., easily sol. in dil. NaOH and concd. HCl, loses both Ac groups when boiled 5 min. with dil. HCl; boiled 1 hr. with 50 parts H₂O it gives 1-methyl-2-acetamino-4,5-azimidobenzene, needles, m. 235.degree., also obtained by recrystg. the di-Ac compd. twice from PhNO₂ or evapp. its C₅H₅N soln. on the H₂O bath and converted back into the di-Ac compd. with Ac₂O and cold NaOH; it is sol. in dil. alkalis and in concd. HCl; 1 g. heated on the H₂O bath with 15 cc. H₂O, 5 cc. alc. and 5 cc. concd. HCl gives 1-methyl-2-amino-4,5-azimidobenzene, needles from H₂O, m. 173.degree. (on slow cooling of the aq. soln. it seps. in red-brown prisms with H₂O of crystn. in which it m. 80-3.degree.), sol. in dil. NaOH, gives with concd. HCl a difficultly sol. salt at once dissolving on addition of H₂O. o-Amino-p,m'-dinitrodiphenylamine (b), obtained in 60% yield from 5 g. O₂NC₆H₄NHC₆H₃(NO₂)₂ in 30 cc. each of warm Me₂CO and alc. treated with 10 g. crystd. Na₂S in 20 cc. hot H₂O, heated 10 min. on the H₂O bath, cooled, dild. with 4 vols. of H₂O, the brown voluminous ppt. extd. with boiling Me₂CO and a few drops of NH₄OH until the ext. gives no ppt. with H₂O, the H₂O ppt. dissolved in boiling dil. HCl (1:4), pptd. with NH₄OH, allowed to stand some hrs. in the cold and crystd. from dil. alc., red needles, m. 207-8.degree., easily sol. in very dil. HCl, sol. in boiling NaOH with red color and loss of NH₃; acetyl derivative, golden yellow needles from Me₂CO, m. 205.degree., N-m-Nitrophenyl-4-methyl-p-nitrobenzimidazole, from (b) covered with hot Ac₂O and 1-2 drops concd. H₂SO₄, whereupon the (b) dissolves with energetic reaction, then dild. with H₂O, brought to a boil, filtered and cooled, pptd. from dil. HCl with NH₄OH and crystal. from alc., Ag-white needles, m. 226-7.degree., easily sol. in cold dil. HCl, insol. in cold or hot alkalis, also obtained by heating the above Ac deriv. a short time at its m. p. or boiling it in dil. HCl. N-m-Nitrophenyl-p-nitroazimidobenzene, from (b) and NaNO₂ in cold dil. HCl, yellow-brown needles from C₅H₅N-H₂O, m. 181.degree., insol. in HCl or NaOH. N-m-Aminophenyl-p-aminoazimidobenzene, from 1 g. of the di-NO₂ compd., 2.5 g. SnCl₂ and a little Sn cautiously warmed on the H₂O bath with 5 cc. concd. HCl until a clear soln. results, dild. with H₂O, filtered, supersatd. with cold NaOH, repeatedly pptd. from cold dil. HCl with NaOH, dried on clay, dissolved in hot Me₂CO, treated with an equal vol. of hot H₂O and slowly freed from Me₂CO on the H₂O bath, brownish needles, m. 214-5.degree., easily sol. in dil. HCl; when covered with Ac₂O it dissolves with evolution of heat and at once deposits the diacetyl derivative, sepp. from alc.-H₂O in gelatinous flocks which dry on clay to gleaming scales, m. 248-9.degree.. For details concerning the prepn. of the azo dyes and the dyeing expts. cf. R.'s dissertation (Zurich, 1915).

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ACCESSION NUMBER: 1915:4757 CAPLUS

DOCUMENT NUMBER: 9:4757

ORIGINAL REFERENCE NO.: 9:7190-h

TITLE: Microscopic studies on cotton

AUTHOR(S): Herzog, A.

SOURCE: Chemiker-Zeitung (1914), 38, 1089-91, 1097-1100

CODEN: CMKZAT; ISSN: 0009-2894

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

Dead and unripe fibers both have very thin cell-walls, and are not solid, as has been often stated. The former are collapsed tubes, having opposite walls in contact and are irregularly twisted. The cell-walls are thin and transparent (0.5-0.6 μ .). The width exceeds that of ripe or half ripe fibers by 31-65%. Oblique striations (45.degree.) are observed, and those of the under wall show through, causing the fiber to be marked by lines. The lumen contains very little dried albuminous matter. Dead fibers dissolve more slowly in not too strong Cu-ammonia soln. than ripe fibers. The cuticle is not highly developed as is shown by the use of Ru red (A. Herzog, C. A. 6, 2171). Bubble-like swellings which occur in ripe fibers are never observed. The ultramicroscope shows that the micellae lie in a direction parallel to the length of the fiber. Comparisons of dyed dead fibers and sections of the same thickness from dyed ripe fibers indicate that the light color of dead fibers is due solely to their smaller optical thickness. Dead fibers are doubly refractive, although only the lower first-order colors appear between crossed nicols. With an interposed mica plate (1/6 λ), dead fibers appear white or black, according to their position relative to the axes of the plate and the position of the nicols. Ripe or unripe fibers, on the other hand, show no such regular black or gray colors. Unripe fibers are very similar in form and optical properties to dead fibers, and behave similarly in textiles. The cell walls are somewhat thicker, being at least 1 μ . in thickness. The quantity of protoplasmic residue is larger than in dead fibers. No stratification of cell walls is seen, and none is shown by swelling agents. With ***substantive*** dyes, unripe fibers give deeper colors than dead fibers, on account of the contents of the lumen. The walls of neither are dyed. The width of unripe fibers is nearly the same as that of ripe fibers. The morphological characteristics of three classes of beard hairs are minutely described. An exam. of the raw stock and mercerized product in a large number of factory lots showed that those samples which yielded an unsatisfactory luster contained relatively more unripe fibers or fibers which for other reasons did not undergo the usual changes during mercerization. By sampling a given lot of cotton and observing the behavior of a relatively large number of fibers (microscopically) when treated with KOH soln., H. finds it possible to judge of the results to be expected in mercerization in factory practice.

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(Continued)

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ACCESSION NUMBER: 1914:10151 CAPLUS

DOCUMENT NUMBER: 8:10151

ORIGINAL REFERENCE NO.: 8:1511a-e

TITLE: The dyeing of hair and hair substitutes

AUTHOR(S): Seidel, Albert

CORPORATE SOURCE: Leipziger

SOURCE: Faerber-Zeitung (1914), 63, 3-5

CODEN: FAZTAZ

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

Treatment previous to dyeing consists in washing the hair in a bath containing 50 g. soap, 20-100 g. anhydrous Na₂CO₃, or an equiv. amt. of the cryst. salt, or NH₄OH, in 100 l. at 30-40.degree. for 10-20 min., followed by draining and thorough rinsing. This bath may be used again after strengthening. Procedure for exceptional cases is given. To make it take up dye, material contg. much dead hair is freed from fat and dirt, then placed for 15-20 min. in a bath contg. 1.5-2.0 g. HCl, 22.degree. B. act. e., per l., then drained and placed for 30 min. in a weak bleaching powder bath of 0.2.degree. B. act. e., after which it is returned to the HCl bath for 15-20 min., and then rinsed until acid-free. The treatment in the bleach bath may be repeated, or a bath of 0.5.degree. B. act. e., but not stronger, may be used. The bleach bath must be clear and should be filtered through cotton when necessary. Dyeing with acid dyestuffs is done in a boiling bath, to which 5-8% AcOH. Or 2-4% H₂SO₄, or 5-10% tartaric acid prep., or 2-4% of 85% HCOOH have been added, the goods remaining in the bath about 1 hr. Basic dyes are used in neutral or weak AcOH baths at 50-70.degree.. Artificial dyes have almost entirely replaced logwood for dyeing black. Substantive dyes are seldom used with hair, but are preferred for vegetable ***hair*** substitutes. Sisal is dyed in a bath containing 2 g. NH₄OH, 0.5 g. Na₂CO₃, 5 g. Na₂SO₄, and 2-3 g. patent dianiline black to each 100 g. of fiber. The bath is boiled 30 min. with steam and allowed to stand 30 min. longer, then drained, washed and dried. Manila hemp and other fibers are dyed like sisal but should remain longer in the bath, and require about 1/3 more of the dye. These fibers should be boiled and rinsed before dyeing. Many formulas are given for different colors, and detailed directions for special cases.